
IOWA UTILITIES BOARD
Policy Development Section

Docket No.: EEP-2013-0001

Utility: Black Hills/Iowa Gas Utility
Company, LLC, d/b/a Black
Hills Energy

File Date/Due Date: March 29, 2013/April 26, 2013

Memo Date: April 18, 2013

TO: The Board

FROM: Gordon Dunn and Brenda Biddle

SUBJECT: Staff review of compliance with filing requirements, identification of additional information needed, and recommendation for docketing.

Action Requested: Approve the attached order docketing the energy efficiency plan filed by Black Hills/Iowa Gas Utility Company, LLC (Black Hills). The order docketing the plan should require Black Hills to provide answers to the questions listed in Appendix A.

I. Background

In an order issued March 3, 2009, the Board directed Black Hills to file its energy efficiency plan for 2014-2018 on or before April 1, 2013. On March 29, 2013, Black Hills filed its Natural Gas Energy Efficiency Plan (Plan) for the period 2014-2018. In addition to the Plan, Black Hills filed direct testimony of James Dillon and Appendices A – H which include the Joint Assessment of Energy Capacity Savings Potential and Appendices, Collaborative Presentations, Avoided Cost Methodology, Gas Forecasts, Rate Tariffs, Detailed Cost-Effectiveness Results, and Cross-References to Board Rules.

II. Legal Standards

Iowa Code § 476.6(16) *Energy efficiency implementation, cost review, and cost recovery.*

- a. Gas and electric utilities required to be rate-regulated under this chapter shall file energy efficiency plans with the board. An energy efficiency plan and budget shall include a range of programs, tailored to the needs of all customer classes, including residential, commercial, and industrial customers, for energy efficiency opportunities. The plans shall include programs for qualified low-income persons including a cooperative program with any community action agency within the utility's service area

to implement countywide or communitywide energy efficiency programs for qualified low-income persons. Rate-regulated gas and electric utilities shall utilize Iowa agencies and Iowa contractors to the maximum extent cost-effective in their energy efficiency plans filed with the board.

- b. A gas and electric utility required to be rate-regulated under this chapter shall assess potential energy and capacity savings available from actual and projected customer usage by applying commercially available technology and improved operating practices to energy-using equipment and buildings. The utility shall submit the assessment to the board. Upon receipt of the assessment, the board shall consult with the office of energy independence to develop specific capacity and energy savings performance standards for each utility. The utility shall submit an energy efficiency plan which shall include economically achievable programs designed to attain these energy and capacity performance standards. The board shall periodically report the energy efficiency results including energy savings of each utility to the general assembly.
- e. The board shall conduct contested case proceedings for review of energy efficiency plans and budgets filed by gas and electric utilities required to be rate-regulated under this chapter. The board may approve, reject, or modify the plans and budgets. Notwithstanding the provisions of section 17A.19, subsection 5, in an application for judicial review of the board's decision concerning a utility's energy efficiency plan or budget, the reviewing court shall not order a stay. Whenever a request to modify an approved plan or budget is filed subsequently by the office of consumer advocate or a gas or electric utility required to be rate-regulated under this chapter, the board shall promptly initiate a formal proceeding if the board determines that any reasonable ground exists for investigating the request. The formal proceeding may be initiated at any time by the board on its own motion. Implementation of board-approved plans or budgets shall be considered continuous in nature and shall be subject to investigation at any time by the board or the office of the consumer advocate.
- f. Notice to customers of a contested case proceeding for review of energy efficiency plans and budgets shall be in a manner prescribed by the board.
- g. A gas or electric utility required to be rate-regulated under this chapter may recover, through an automatic adjustment mechanism filed pursuant to subsection 8, over a period not to exceed the term of the plan, the costs of an energy efficiency plan approved by the board, including amounts for a plan approved prior to July 1, 1996, in a contested case proceeding conducted pursuant to paragraph "e". The board shall periodically conduct a contested case proceeding to evaluate the reasonableness and prudence of the utility's implementation of an approved energy efficiency

plan and budget. If a utility is not taking all reasonable actions to cost-effectively implement an approved energy efficiency plan, the board shall not allow the utility to recover from customers costs in excess of those costs that would be incurred under reasonable and prudent implementation and shall not allow the utility to recover future costs at a level other than what the board determines to be reasonable and prudent. If the result of a contested case proceeding is a judgment against a utility, that utility's future level of cost recovery shall be reduced by the amount by which the programs were found to be imprudently conducted. The utility shall not represent energy efficiency in customer billings as a separate cost or expense unless the board otherwise approves.

- h. A rate-regulated utility required to submit an energy efficiency plan under this subsection shall, upon the request of a state agency or political subdivision to which it provides service, provide advice and assistance regarding measures which the state agency or political subdivision might take in achieving improved energy efficiency results. The cooperation shall include assistance in accessing financial assistance for energy efficiency measures.

III. Analysis

Notable features of Black Hills' Plan:

- The menu of energy efficiency programs is similar to the list of programs now being implemented; however, several existing programs will be merged while one existing program and other existing measures will be eliminated.
- The total budget for Black Hill's plan is proposed at \$6.1 million in 2014, increasing to \$7.1 million in 2018.
- The total savings during the five-year plan is estimated to be over 575,000 DTH, or about 0.68 percent of annual sales.

Additional features of the Black Hills initial filing:

The Black Hills Energy Efficiency Plan was filed via the IUB Electronic Filing System. The major elements or IUB requirements of the plan are generally placed in discrete file-named "pdf" documents, which allow readers to readily locate, open, and examine the documents. However, staff has identified several problems which will require Black Hills to file additional information essential for further analysis of the Black Hills plan. The main issues are:

1. Staff cannot locate any data or calculations in the Assessment of Potential that support summary graphs or tables.

Appendix A and B of the Black Hills filing contain the Final Report on the Assessment of Potential, including many graphs and tables, none of which are supported by links or references to underlying data or calculations in other parts of the plan.

While there is an extensive list of energy efficiency technologies and various tables listing the results for Technical Potential or Economic Potential, there are no calculations or datasets which link the former to the latter.

2. The calculations of benefits and costs for Black Hills' programs are completely unsupported by data, spreadsheets, or clear explanations of the inputs.

The calculations for the benefits and costs for the Black Hills programs are not adequately supported by data, spreadsheets, or clear explanations of the inputs.

Black Hills provides reasonably detailed summary tables for its entire set of programs, but these summary tables are not supported by actual calculations showing how the projected measures, impacts, and costs are estimated into the future and then brought back to a present value. Staff believes Black Hills Energy should provide data and calculations in an Excel spreadsheet to support the benefits and costs for its new plan.

IV. Recommendation

The Board should sign the attached order docketing the energy efficiency plan filed by Black Hills. The order requires Black Hills to provide answers to questions and requests for additional information and to file the information as addenda to the Plan filed March 29, 2013.

1. Black Hills shall include in Table ES-8 the forecasted sales by year and the therm savings as a percent of sales by year.
2. Black Hills shall provide the inputs and calculations for the Discount and Inflation rates referenced in Table 1. Discount Rates.
 - a. Black Hills shall also explain its reasons for using the “12-month average of the 10-year treasury bond” for the Societal Discount rate rather than a 12-month average of the 10-year and 30-year Treasury Bond rate as the discount rate as outlined in the definition for the Societal test in 199 IAC 35.2.
3. In Table 2 (page 15), Black Hills provides the Technical, Economic, and Market Potential for the various sectors for the 10-year period. Black Hills shall file an additional table titled “Estimated Plan Potential and Goals” which will show projected results for each of the five years in the proposed plan. The table must show for each year and each consumption metric (natural gas therms and peak day therms) the Technical, Economic, and Market Potential and the Black Hills goals. The table must also show the natural gas therms and peak day therms for the Technical, Economic, and Market Potential and the Black Hills goals as percentages of projected base case sales.
4. Black Hills shall provide the criteria it used in its qualitative screening of measures, identify each measure that was subjected to the qualitative screens, and show whether the measure passed or failed the qualitative screening process. For measures failing the qualitative screening process, Black Hills shall identify the criteria which caused the measure to fail.

For measures currently offered by Black Hills that have been excluded from this plan, identify the measure and the specific reasons the measure is excluded from this plan, including the benefit cost information.

5. Black Hills shall file an Excel workbook(s) providing data and calculations for projected energy and capacity savings, for every program, for each year of the plan.

The table should be provided in Excel, with rows defined by program and measure and include the following columns:

- a. Program name
- b. Measure name
- c. Measure description
- d. Base equipment
- e. Baseline therms

- f. Baseline peak day therms
 - g. Savings as percent of end use energy
 - h. Savings as percent of end use capacity
 - i. Measure life
 - j. Incremental measure costs
 - k. Incentives as percent of incremental measure cost
 - l. Participants per year (2014-2018)
 - m. Therm Savings per year (2014-2018)
 - n. Peak Therm Savings per year (2014-2018)
 - o. Budget per year (2014-2018)
6. Black Hills shall provide the following information for the Cost-Effectiveness Test Results in its Appendix G, for each program and for the aggregate categories of programs described as “Entire Portfolio, Residential Portfolio, Non-Residential Portfolio, and the Low-Income and Public Purpose Portfolio”:
- a. A detailed Excel worksheet for each program showing the calculations of benefits and costs for each economic test, for all projected years of implementation (2014 through 2018). The worksheet shall include a summary table listing the discount rate for each economic test and the following items:
 - Summary - Gas Only:
 - B/C Ratio
 - Net Benefits (\$)
 - Total Benefits (\$)
 - Total Costs (\$)
 - Benefit Components in dollars:
 - Customer Gas Bill Decrease
 - Customer Rebates Received - Gas
 - Gas Acquisition Cost Savings
 - Externalities – Gas
 - Cost Components in dollars:
 - Incremental Participant Cost - Gas
 - Utility Gas Revenue Decrease
 - Administrative Costs - Gas
 - Rebates Paid - Gas

The worksheets shall project the future annual dollars for the items needed to calculate benefits and costs, with rows defined by all future years in which impacts of measures resulting in benefits and costs occur, and columns defined by the benefit and cost components listed above. Columns shall also include the total

present value in current dollars for the values in the column, for each separate discount rate used.

- b. The workbook should also contain a worksheet that lists the common assumptions used in the benefit cost tests and references for those assumptions.
7. Black Hills shall explain how the budget categories used (Administration, Marketing & Training, Program Delivery, Evaluation Delivery, Customer Incentives, Dealer Incentives, and EM&V) correspond to the budget categories outlined in 199 IAC 35.8(2)"d"(1)-(8).
8. Black Hills shall explain how the proposed incentives in Table 10 (R.1 Residential Evaluation Program Measure Summary) align with those discussed in the narrative under the "Budget" heading on page 29. Specifically, the proposed incentive for Tier 2 listed in Table 10 is \$500, but the narrative on page 20 states \$400.
9. Black Hills shall reconcile the participation numbers in the narrative under the "Participation" heading on page 27 to the participation numbers in Table 11. R.1 Residential Evaluation Program 2014-2018 Participation Goals.